State Compendium - Region 10

Programs and Regulatory Activities Related to Animal Feeding Operations

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CHAPTER 1. INTRODUCTION

This compendium has been developed to support the U.S. Environmental Protection Agency's (EPA) efforts to address the environmental and public health problems associated with animal feeding operations (AFOs) and concentrated animal feeding operations (CAFOs). The compendium is a compilation of AFO-related state program and state initiative information intended to illustrate how states are regulating AFOs, with a specific focus on the use of permits or similar mechanisms. This document is not intended as an evaluation of the effectiveness of individual state efforts.

Most of the State programmatic and regulatory information gathered and presented in this document pertains to controlling water quality impacts from AFOs. Although some states have designed regulatory standards to control non-water quality impacts (e.g., setback requirements for odor control), the vast majority of information presented is based on state efforts to address water quality and nutrient management issues.

The *Compendium* has been compiled from a number of publicly available information sources, including:

- Previously published research and existing surveys of State AFO and CAFO programs
- World Wide Web pages of state governments, agencies, and national agriculture organizations
- Select publicly accessible state statutes and regulations (generally accessed via the Web)
- National Pollutant Discharge Elimination System (NPDES) permits developed for CAFOs
- Summaries of State program information provided by EPA regional offices

Based on these sources of publicly available information, the *Compendium* represents a reasonable appraisal of how states are addressing AFO-related environmental problems. Nevertheless, the information presented here is subject to several important limits. First, in compiling this compendium no new formal survey of the states was conducted, nor was a comprehensive review of each state's regulations undertaken, as both were beyond the scope of this task. Thus, in some instances information presented here may be limited or minor gaps may exist. Second, state regulation of AFOs and CAFOs can be complex, involving both federal and state laws and regulations, often originating at the state level from several different agencies, with numerous variations in approaches, requirements, and jurisdiction among the different states. Consequently, different levels of information may be available among states and even between relevant agencies within a state. Finally, the various sources of publicly available information used were reviewed and compiled over a period of time during which many States were reexamining and revising their AFO regulations. As a result, this compendium is by necessity a working document that depicts reasonably current practices, but may in some instances be superceded by recent state programmatic and regulatory changes. The information presented here must be considered subject to these limits and specific regulatory requirements should be verified with state or EPA authorities as appropriate.

The *Compendium of State AFO Programs* consists of four chapters, including this introduction, and three Appendices. Chapter 2 of this document provides a national overview of State AFO initiatives based on the publicly available data. It attempts to summarize how states regulate

AFOs and highlights key aspects of State AFO programs.

Chapter 3 presents individual state profiles. Each profile includes available information addressing: background, lead regulatory agency, state regulations regarding AFO/CAFOs, types of permits, permit coverage, permit conditions, enforcement information, state voluntary programs, additional state-specific information, and references.

Finally, the *Compendium* contains three Appendices. Appendix A describe methods used to develop the *Compendium* and highlights the limits of the data collection efforts. Appendix B lists some of the more frequently used acronyms. Appendix C provides a glossary of useful terms associated with animal feedlots.

CHAPTER 2. NATIONAL SUMMARY OF STATE INITIATIVES

This chapter presents a national overview of state AFO regulatory programs and initiatives based on a review of publicly available data. The discussion begins with a brief review of the respective federal and state roles in administering the National Pollutant Discharge Elimination System (NPDES) program (Section 2.1), followed by a summary of the federal regulations addressing AFOs and CAFOs (Section 2.2). The remainder of this chapter summarizes State Programs/Initiatives (Section 2.3) and Recent State Initiatives/Trends (Section 2.4).

2.1 Overview of EPA/State Roles in NPDES Program

Under the Clean Water Act (CWA), NPDES permits may be issued by EPA or any state authorized by EPA to implement the NPDES program. Currently, 44 states are authorized to administer the base NPDES program.[1] (The base program includes the federal requirements applicable to AFOs and CAFOs, which are discussed below).[2] To become an authorized NPDES state, the requirements imposed under a State's NPDES program must at a minimum be as stringent as the requirements imposed under the federal NPDES program. The states, however, may impose requirements that are broader in scope or more stringent than the requirements imposed under the federal NPDES program. In states not authorized to implement the NPDES program, the appropriate EPA Regional office is responsible for implementing the NPDES program.

Regarding the regulation of AFOs, 44 of the states authorized to implement the NPDES program have some form of program requirements generally deemed to be as stringent as the federal requirements applicable to AFOs. Yet, it appears that only a handful of states rely solely on their State NPDES regulations to address CAFOs. Rather, most use their NPDES regulations as one part of their CAFO program and supplement these requirements with additional provisions.

Because the federal CAFO regulations constitute the core program requirements in many authorized states and are used for purposes of comparison and summary in this document, these regulations are briefly summarized below.

2.2 Overvieew of EPA AFO/CAFO Definitions and Effluent Limits, Under the Federal NPDES Program

Under the federal NPDES program, EPA has developed regulations that define which facilities constitute AFOs and which constitute CAFOs. Under these regulations, facilities that constitute CAFOs are defined as point sources for purposes of the NPDES program. No facility may discharge pollutants from a point source to waters of the United States without a NPDES permit.

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[1] State NPDES authorization may be obtained for the base program, as well as for components addressing federal facilities, pretreatment, general permits, and sludge. The Virgin Islands is also authorized to administer the NPDES program.

[2] Alaska, Arizona, Idaho, Massachusetts, New Hampshire, and New Mexico are not authorized to implement the NPDES program. Oklahoma is delegated to implement the NPDES program, however; Oklahoma does not issue a general NPDES permit specifically for CAFOs and is in effect unauthorized to administer the CAFO portion of the NPDES program. Oklahoma CAFOs should apply for coverage under the general NPDES CAFO permit issued by U.S. EPA Region 6 (See 63 FR 53002).

The existing federal regulatory definitions of AFOs and CAFOs are provided at 40 *C.F.R.* § 122.23 and Part 122, Appendix B. These regulations define an AFO as a facility that meets the following criteria:

- Animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period.

- Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.[3]

Federal regulations define a CAFO generally as an animal feeding operation that:

- Confines more than 1,000 animal units (AUs)[4], or

- Confines between 301 to 1,000 AUs and discharges pollutants:

  - Into waters of the United States through a man-made ditch, flushing system, or similar man-made device, or

  - Directly into waters of the United States that originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

The CAFO regulatory definition also provides that facilities that discharge pollutants only in the event of a 25-year, 24-hour storm event are not defined as CAFOs.

Under existing federal regulations, the permitting authority (e.g., EPA or an authorized state) can designate an AFO as a CAFO upon determining that the operation is a significant contributor of pollution to waters of the United States. This determination, which takes a number of factors into account (e.g., slope, vegetation, and the proximity of the operation to surface waters), is based on an onsite inspection by the agency that issues the permits and is subject to certain discharge conditions.

In addition to the provisions that define AFOs and CAFOs, EPA has promulgated an effluent limitation guideline (ELG) applicable to feedlots (feedlots are defined in the same manner as CAFOs) (see 40 *C.F.R.* § 412). This regulation generally establishes that CAFOs are subject to a zero discharge standard except for discharges, resulting from a catastrophic or chronic storm event, that occur from a properly maintained and operated waste management system designed to control waste and runoff from a 25-year, 24-hour storm.

2.3 State Programs/Initiatives

[3] 40 *CFR* 122.23 (b)(1).

[4] The following examples are animal quantities equivalent to 1,000 animal units: 1,000 slaughter and feeder cattle, 700 mature dairy cattle, 2,500 swine each weighing more than 25 kilograms, 30,000 laying hens or broilers (if a facility uses a liquid manure system), and 100,000 laying hens or broilers (if a facility uses continuous overflow watering). See 40 *CFR* Part 122, Appendix B.

The national summary of state programs and initiatives is divided into four categories: (1) regulatory programs used by states, (2) State definitions of CAFO/AFO, (3) use of general versus individual permits, and (4) key permit conditions.

2.3.1 Regulatory Approach

Figure 1 provides a state-by-state depiction of the AFO permitting mechanisms available in each state. States have five categories of permitting mechanisms:

- Federally Administered NPDES Program
- Federally Administered NPDES Program and State Administered Non-NPDES Program
- State Administered NPDES Program only
- State Administered NPDES Program and State Administered Non-NPDES Program
- State Administered Non-NPDES Program only

As discussed above, 44 states are authorized to implement the base NPDES CAFO program. As illustrated in Figure 1 and summarized in Table 1, of the 44 states authorized to implement the NPDES CAFO program:

- Thirty-two states administer a State NPDES CAFO program in combination with some other state permit, license, or authorization program. Typically, this additional State authorization is a construction or operating permit.

- Seven states regulate CAFOs exclusively under their state NPDES authority (HI, NJ, NV, NY, RI, TN, WV).

- six states have chosen to solely regulate CAFOs under State non-NPDES programs (CO, MI, NC, OR, SC, VA).

Of the six states not authorized to administer the NPDES program:

- Three rely solely on federal NPDES permits to address CAFOs (AK, MA, NH).

- Three impose some form of a state non-NPDES program requirement, although EPA remains responsible for administering the NPDES CAFO requirements in these states (AZ, ID, NM).

While Oklahoma is one of the 44 NPDES-delegated states, Oklahoma does not have a general NPDES permit specific to CAFOs. In this special case, Region 6 administers the portion of Oklahoma's NPDES program that deals with CAFOs by covering Oklahoma CAFOs under the Region 6 general NPDES permit for CAFOs. Oklahoma also uses a State non-NPDES operating permit to regulate state CAFOs.

Overall, 28 states have a combination of permitting mechanisms available for addressing environmental impacts from AFOs. Eleven states exclusively regulate CAFOs under a state or federal NPDES program. Five states (CO, MI, NC, SC and OR) only regulate AFOs under a

state non-NPDES program, with Colorado and Michigan not requiring any AFOs to obtain any form of operating permit.

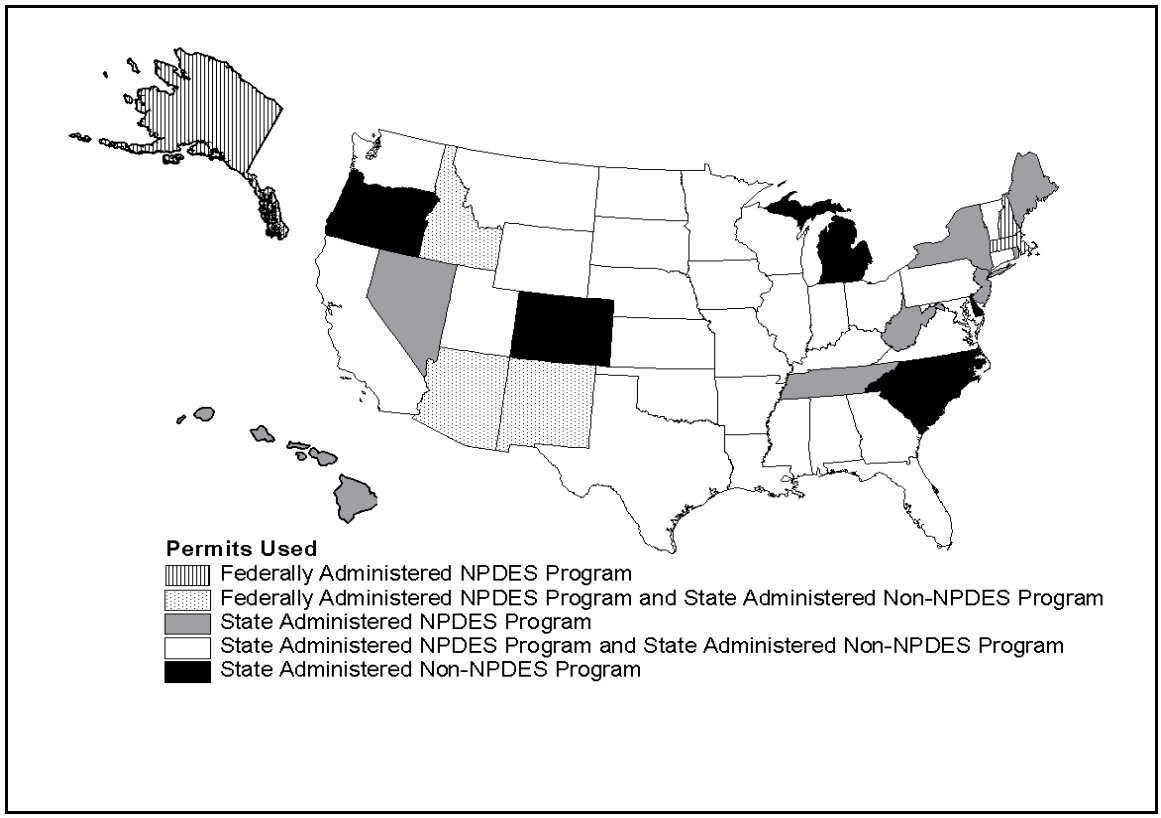

Figure 1. Regulatory Mechanisms for AFO Permitting in Each State

2.3.2 State Definitions of CAFO

EPA and state definitions of a CAFO are important because the definitions determine the scope of the existing federal and state regulatory programs. EPA's definition of a CAFO is based on the length of time animals are confined, the number of animals confined (animal units), and whether or not the facility directly discharges pollutants into waters of the United States. Virtually all state NPDES CAFO programs use the federal definition for CAFO. The vast majority of states also use the federal definition of CAFO for State non-NPDES CAFO programs. Several states, however, use a lower numeric threshold (number of animal units) for non-NPDES permitting. For example, Minnesota issues individual NPDES permits to confined feeding operations as defined by federal regulation and State feedlot permits (non-NPDES) to facilities with more than 10 animal units (calculated by using the formula used in the federal definition).

States that use the federal definition of CAFO may also increase the scope of coverage required through state NPDES programs by reducing the number of animals (number of animal units) a facility can confine before being subject to permitting.

Table 1. Identification of Permit Type and Permit Requirements Within State AFO Programs in the United States[1]

State	State NPDES	State Control Mechanism[2] (non-NPDES)		General/ Individual Permits				Permit Conditions[3]			
		Construction	Operating	NPDES		State non-NPDES		Effluent[4]	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite
AL	✓	✓	✓	✓	✓			✓	✓	✓	
AK	ND[5]										
AR	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
AZ	ND		✓	✓		✓				✓	
CA	✓	✓	✓	✓		✓	✓	✓		✓	
CO	*	✓	✓				✓	✓	✓	✓	
CT	✓	✓			✓		✓	✓	✓	✓	
DE	✓		✓						✓		
FL	✓	✓	✓		✓			✓	✓	✓	
GA	✓		✓	✓	✓		✓		✓	✓	
HI	✓				✓						
IA	✓	✓	✓		✓		✓	✓	✓	✓	✓
ID	ND	✓	✓	✓			✓	✓	✓	✓	✓
IL	✓	✓	✓	✓	✓		✓	✓	✓	✓	
IN	✓	✓	✓		✓				✓	✓	
KY	✓	✓	✓			✓	✓	✓	✓	✓	✓
KS	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓

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		Construction	Operating	NPDES		State non-NPDES		Effluent[4]	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite
LA	✓		✓		✓		✓	✓	✓	✓	
MA	ND										
MD	✓	✓	✓	✓	✓		✓	✓	✓	✓	
ME	✓		✓		✓			✓	✓	✓	✓
MI	*										
MN	✓	✓	✓		✓		✓	✓	✓	✓	
MO	✓	✓	✓	✓	✓		✓	✓	✓	✓	
MS	✓		✓	✓	✓	✓	✓	✓			
MT	✓	✓	✓	✓	✓	✓	✓	✓		✓	
NE	✓	✓	✓		✓		✓	✓	✓	✓	
NC	*		✓			✓	✓	✓	✓	✓	
ND	✓	✓	✓		✓		✓	✓	✓	✓	
NH	ND										
NJ	✓				✓					✓	
NM	ND		✓				✓		✓	✓	
NV	✓				✓						
NY	✓			✓	✓			✓	✓	✓	

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State	State NPDES	State Control Mechanism[2] (non-NPDES)		General/ Individual Permits				Permit Conditions[3]			
		Construction	Operating	NPDES		State non-NPDES		Effluent[4]	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite
OH	✓	✓	✓	✓	✓		✓	✓	✓	✓	
OK	✓	✓	✓	✓	✓		✓	✓	✓	✓	
OR	*	✓	✓			✓	✓			✓	
PA	✓		✓	✓	✓			✓	✓	✓	✓
RI	✓				✓						
SC	*	✓	✓			✓	✓	✓	✓	✓	
SD	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
TN	✓			✓	✓			✓	✓	✓	
TX	✓		✓	✓	✓		✓	✓	✓	✓	
UT	✓	✓	✓	✓	✓		✓		✓		
VA	✓		✓			✓	✓	✓	✓	✓	
VT	✓	✓					✓	✓	✓	✓	
WA	✓		✓	✓	✓	✓	✓	✓	✓	✓	
WI	✓	✓	✓	✓	✓			✓	✓	✓	
WV	✓							✓	✓	✓	
WY	✓	✓			✓		✓	✓	✓	✓	
Totals	38	27	36	20	32	12	31	35	38	40	8

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State	State NPDES	State Control Mechanism[2] (non-NPDES)		General/ Individual Permits				Permit Conditions[3]			
		Construction	Operating	NPDES		State non-NPDES		Effluent[4]	Management	Land Application	
				General	Individual	General	Individual			Agronomic Rates	Offsite

[1] Blank data cells indicate that the program element was not a primary component of the state program or information was not sufficient to make a determination.

[2] State control mechanisms include all forms of formal state approval required to construct or operate an AFO, such as state issued non-NPDES permits, letters of approval, and certificates of coverage.

[3] Permit conditions are requirements imposed through either NPDES or state non-NPDES programs.

[4] Effluent limits refer to whether or not a state imposes federal effluent limits to AFOs/CAFOs (i.e., no discharge allowed except during 25 year, 24- hour storms). A check could indicate that a state imposes effluent limits that are more strict than the federal requirements (e.g., Arkansas does not allow any discharges regardless of storm events).

[5] ND = States not authorized to administer the NPDES program.

* Although authorized to administer the NPDES program, the state chooses to use a separate program to address AFOs.

Some states have unique definitions for their livestock regulatory programs that do not follow the federal definition (See Table 2). States typically base their definition on number of animals confined, weight of animals and design capacity of waste control system, or gross income of agricultural operation. These definitions are exclusively applied to State non-NPDES programs.

Table 2. Selected State CAFO Definitions that Differ from the EPA Definition and Use of the Definition in Regulatory Control

State	Classification Scheme	Facilities Subject to State Non-NPDES Regulatory
Indiana	Number of animals	Operation with 600 swine, 300 cattle, or 30,000 birds
Iowa	Weight of animals in a confinement feeding operation	Permitting threshold for construction permit based on type of waste control system and design capacity (based on weight) of that system (e.g., an anaerobic lagoon with a design capacity of 400,000 lbs of bovine requires construction permits)
Kansas	Number of animals	Operations with 300 animal units
Maryland	Gross income and animal units	All agricultural operations with incomes of at least $2,500 or eight animal units
North Carolina	Number of animals	Operations designed for 100 head of cattle, 75 horses, 250 swine, 1,000 sheep, or 30,000 birds

One important difference between state livestock regulatory programs and the federal program is that numerous states have addressed the issue of authority to issue permits (or other control mechanisms) to CAFOs by requiring that all or a specified subgroup of CAFOs regardless of whether they have a direct point source discharge of pollutants to U.S. waters obtain a permit.[5] This requirement is imposed under state, not federal regulations.

For example, Arkansas requires all AFOs that use a liquid waste management system to obtain permit coverage under either the State-issued general permit or an individual permit. AFOs with dry waste management systems are not automatically required to obtain a permit; however, all facilities with more than 1,000 animal units are subject to coverage under the State's general permit. This is an important distinction because states have opted to expand the scope of facilities that fall within the definition of a CAFO by eliminating the requirement that a facility must have a discharge before being considered a CAFO. In other words, states are requiring large facilities with a potential to discharge to abide by CAFO rules.

2.3.3 General/Individual Permits

The regulation of CAFOs is challenging, in part, because of the large number of facilities across the country. In 1995 it was estimated that 450,000 operations nationwide confined or concentrated animals, of which a very conservative estimate indicated that at least 6,600 had

[5] Preliminary data indicate that the following states require all or a subset of CAFOs (under various definitions) to obtain permits: AL, AR, AZ, CO, DE, IA, ID, IN, KS, KY, MN, MS, NC, OH, OR, SC, WY.

more than 1,000 animal units and may have been considered CAFOs under the federal definition[6]. More recent estimates describe an AFO universe of approximately 375,700 operations of which approximately 12,600 are AFO operations with more than 1,000 AUs, 26,500 are AFO operations with 300-1,000 AUs, and 336,600 are AFO operations with fewer than 300 AUs.[7] One way of reducing the administrative burden associated with permitting such large numbers of facilities is through general permits. Existing regulations provide that general permits may be issued to cover a category of discharges within a geographic region. Within such areas, general permits may regulate either storm water point sources or a category of point sources that involves similar operations with similar wastes. Operations subject to the same effluent limitations and operating conditions, and requiring similar monitoring, are most appropriately regulated under a general permit. EPA and the states are using general permits to regulate CAFOs, and this trend appears to be increasing. South Dakota, for example, has established two general permits for CAFOs, one to address swine operations and another for all other livestock.

Of the 44 states authorized to implement the NPDES program:

- Twenty have issued a State NPDES general permit for CAFOs (this number excludes federally issued general permits).

- Twelve have issued a state non-NPDES general permit for CAFOs.

Of the six states not authorized to administer the NPDES program (this excludes Oklahoma), four are subject to a federal general permit.[8]

2.3.4 Permit Conditions

Normally, a NPDES permit will include several types of permit conditions, including technology-based effluent limits (i.e., zero discharge except for discharges resulting from chronic or catastrophic rainfall events if a facility is designed to hold process wastewater and runoff from a 25-year, 24-hour storm for CAFOs subject to § 412), water quality-based effluent limits (if the technology-based limit will not ensure compliance with State water quality standards), monitoring and reporting conditions, special conditions (e.g., conditions that impose additional controls beyond numeric limits, such as best management practices [BMPs]), and standard conditions (e.g., duty to comply, duty to ensure proper operation, and duty to provide information).

The federal technology-based effluent limit for CAFOs is "no discharge." The effluent limit includes an exception in the event of chronic or catastrophic rain for facilities that have been

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[6] *Animal Agriculture: Information on Waste Management and Water Quality Issues*, General Accounting Office, 1995.

[7] 66 *FR* 2985, January 12, 2001.

[8] CAFOs in New Mexico and Oklahoma are subject to an EPA Region 6 general permit; facilities in Idaho and Alaska are subject to an EPA Region 10 permit, although no facilities are covered under a NPDES permit in Alaska; and CAFOs in Arizona are subject to an EPA Region 9 general permit, although no facilities are covered under the general permit. New Hampshire, and Massachusetts are located in EPA Region 1, which does not have a general NPDES permit for CAFOs.

designed, constructed, and operated to contain all waste water and runoff from a 25-year, 24-hour storm. States not authorized to implement the NPDES program must use this federal effluent limit.

Authorized states generally are equally as stringent, but may be more stringent. Based on a review of available data, of the 44 states authorized to implement the NPDES program 34 use the federal effluent limitation guideline and 6 use a more stringent limit.

Some states with more stringent effluent limits may partially or totally prohibit discharges related to storm events. In Arkansas, for example, the effluent limit prohibits discharges from liquid waste management systems, including periods of precipitation greater than the 25-year, 24-hour storm event. California requires no discharges from new waste control structures even during 100-year storms. And in Iowa, confinement feeding operations (i.e., roofed AFOs) are prohibited from any direct discharge and must dispose of manure in a manner that will not cause a pollution of surface or ground water.

A key concern regarding the management of CAFO waste is ensuring appropriate land application. Land application is the primary management practice used by CAFOs to dispose of animal waste. Several estimates indicate that 90 percent of CAFO-generated waste is land applied. Where properly done, land application of CAFO waste fosters the reuse of the nitrogen, phosphorus, and potassium in these wastes for crop growth. However, where such wastes are excessively or improperly applied, land application can contribute to water quality impairment. Thirty-four states impose requirements addressing land application either through NPDES or non-NPDES programs. Typical requirements include that CAFO waste be applied at agronomic rates and that CAFO operators develop Waste Management Plans.

The breakout of state requirements is as follows:

- Forty states require that CAFO waste be land applied at agronomic rates.
- Thirty-eight states require the development and use of Waste Management Plans.
- One state, Georgia, issues land application system (LAS) permits.

Agronomic rates are typically based on the nitrogen needs of crops, although some states specify that waste be applied at agronomic rates for nitrogen and phosphorous. The determination of agronomic rates varies from state to state. Some states do not address how agronomic rates should be determined, while others, such as Colorado, require CAFO operators to complete detailed plans and field sampling to determine the appropriate amount of waste that can be land applied.

The complexity and details required in a waste management plan also vary among states. Some states do not explicitly identify what items must be addressed in a waste management plan, whereas others have detailed requirements. Typically, CAFO operators are required to address these items in a waste management plan:

- Estimates of the annual volume of waste.
- Schedules for emptying and applying wastes.
- Rates and locations for applying wastes.
- Provisions for determining agronomic rates (i.e., soil testing).

- Provisions for conducting required monitoring and reporting.
- Written agreements with landowners to accept liquid waste.

2.4 Recent State Initiatives/Trends

One clear indication that states have an increasing interest in expanding their efforts to control water quality impacts from AFOs is the promulgation of new state AFO laws, regulations and program initiatives. At least 28 states have developed new laws or regulations related to AFOs since 1996. For example, Kansas, Kentucky, North Carolina, and Wyoming passed legislation regarding swine facilities, with Kentucky and North Carolina imposing moratoriums on the expansion of swine AFOs until state management/regulatory plans could be developed. Mississippi also has imposed a 2-year moratorium on any new CAFOs.

Alabama's recent efforts include developing an NPDES general permitting rule and a Memorandum of Agreement outlining state agency responsibilities as they relate to AFOs. Washington's Dairy Law subjects all dairy farms with more than 300 animal units to permitting and requires each facility to develop NRCS-approved nutrient management plans. Indiana's Confined Feeding Control Law also requires AFOs to develop waste management plans and receive state approval for operating AFOs.

2.5 Summary

State efforts to manage AFOs are carried out through issuance of NPDES permits and state issued non-NPDES permits and/or authorizations. State AFO regulatory programs are directed in large part at controlling the potential environmental impacts on surface water, but also at protecting ground water and managing industry growth. State permits and/or authorization requirements are often imposed regardless of NPDES requirements. State non-NPDES AFO programs are often more stringent than NPDES programs and state efforts often extend coverage to smaller classes of AFOs. Further, the implementation of state non-NPDES programs often receives more agency attention than the implementation of NPDES programs, with several states actively choosing not to use NPDES permits.

While specific state efforts relating to AFOs vary, most states regulate facilities through permitting programs that require animal waste disposal systems to be constructed to prevent the discharge of animal wastes to waters of the United States. Coverage under state permitting programs depends on such criteria as facility size, potential for discharge, type of facility, and type of waste control. Information indicates that state agencies are increasing their commitment of resources to address environmental concerns from AFOs.

CHAPTER 3. STATE PROFILES

This chapter presents individual profiles of state programmatic and regulatory efforts addressing AFOs for each of the 50 states. These profiles provide a state-by-state summary of the key elements within State AFO regulatory programs. The profiles summarize existing State activities to address environmental and health impacts from AFOs. The profiles provide a comprehensive overview of each State program, including the following:

- A description of the lead regulatory agency(ies) (i.e., permitting authority) and agency(ies) responsible for directing voluntary programs.

- State regulations that address AFOs and voluntary programs that encourage regulatory compliance or the use of best management practices.

- The types of permits issued and the permitting processes for each state, the circumstances for which permits are required (i.e., permit coverage), and the requirements and responsibilities of AFO owners and operators (i.e., permit conditions).

- State enforcement activities, inspection programs, and staffing and funding levels dedicated to addressing AFOs.

- Examples of innovative or interesting state projects or programs to control the potential negative environmental impacts of AFOs.

If information on a particular program element was not readily available, or not identified, the following phrase was used: "no information was found in publicly available sources." Figure 3.1 presents the outline used for each of the state profiles.

1.0 Background

2.0 Lead Regulatory Agency

3.0 State Regulations Regarding AFOs/CAFOs

4.0 Type of Permits
- *NPDES*
- *Other (general use or general agriculture permits, construction permits, and operating permits)*

5.0 Permit Coverage (potential nuisance and/or location)

6.0 Permit Conditions
- *Approvals (permits, letters of intent, or certificates of coverage)*
- *Lagoon Design and Specifications (seepage limits, etc.)*
- *Discharge Rules*
- *Waste Management Plans*
- *Separation Distances*
- *Land Application Requirements*
- *Other Requirements*

7.0 Enforcement Information
- *General Enforcement Information*
- *General Inspection Information*

8.0 Voluntary Programs

9.0 Additional State-Specific Information
- *Cooperative Extension Service*
- *Comprehensive Nutrient Management Plan (CNMP)*
- *Memorandums of Understanding/Agreement (MOUs/MOAs)*
- *Other Information*

10.0 References

Figure 3.1 Outline for Profiles of State Programs and Regulatory Activities Related to Animal Feeding Operations

Alaska's CAFO Program

1.0 Background

Data provided by USDA to EPA identifies a very limited number of AFOs in Alaska (USDA, 1999; USDA, 2000).

2.0 Lead Regulatory Agency

Because this state is not authorized to administer the NPDES program, U.S. EPA Region 10 is the CAFO permitting authority for Alaska.

3.0 State Regulations Regarding AFOs/CAFOs

No regulations pertaining to AFOs or CAFOs have been identified.

4.0 Types of Permits

NPDES

Alaska is not authorized by EPA to administer NPDES permits for CAFOs. In addition, Alaska does not have a state program to regulate animal waste (AKDEC, 2000). Therefore, the federal CAFO regulations apply within the state. CAFO NPDES permits are issued through EPA Region 10, which partners with USDA's Natural Resources Conservation Service to help regulate CAFOs and coordinate educational efforts (USEPA, 2000).

5.0 Permit Coverage

No information was found in publicly available sources.

6.0 Permit Conditions

No information was found in publicly available sources.

7.0 Enforcement Information

No information was found in publicly available sources.

8.0 Voluntary Programs

No information was found in publicly available sources.

9.0 Additional State-Specific Information

Cooperative Extension Service

Information about the University of Alaska, Fairbanks, Cooperative Extension is available at *http://zorba.uafadm.alaska.edu/coop-ext/index.html*.

Comprehensive Nutrient Management Plan (CNMP) Certification

Alaska does not have a CNMP preparer certification program.

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Idaho's CAFO Program

1.0 Background

Based on information provided to EPA by the U.S. Department of Agriculture (USDA), there are 240 AFOs with 300 to 1,000 animal units and 149 AFOs with more than 1,000 animal units in Idaho. These are primarily in the beef and dairy livestock sectors (USDA, 1999; USDA, 2000). Idaho has taken specific actions to address water quality impacts from these livestock sectors. In 1995 a Memorandum of Understanding (MOU) was developed between state agencies, the federal government, and private organizations to address dairy operations. In 2000 a similar process has been initiated for beef operations.

2.0 Lead Regulatory Agency

The Idaho Department of Environmental Quality (IDEQ) reviews and approves plans and specifications for all new or modified waste treatment and disposal facilities prior to construction. Since 1995 the Idaho State Department of Agriculture (ISDA) has assumed greater authority for the regulation of animal feeding operations in Idaho. In 1995 an MOU gave ISDA approval authority for dairy waste systems. Recent legislative actions have also given approval authority for beef waste systems to ISDA. More information on ISDA's role is provided below.

ISDA administers the rules governing dairy waste (IDAPA 02, Title 04, Chapter 14) as set forth in the 1995 Idaho Dairy Pollution Prevention Initiative Memorandum of Understanding (MOU). This MOU gives ISDA the responsibility for promulgating and enforcing rules to carry out the MOU, including developing dairy waste inspection protocols, conducting periodic inspections to ensure compliance with the Clean Water Act (CWA) and Idaho Water Quality Standards, reporting releases to U.S. waters, and approving the design and construction of dairy waste management systems as required in the *Idaho Waste Management Guidelines for Confined Feeding Operations*.

During 2000, the Idaho state legislature passed the Beef Cattle Environmental Control Act. The state is in the process of developing the Beef Cattle Environmental Control Program, which will regulate beef animal feeding operations to protect water quality. The beef cattle program is being modeled after the dairy program. An MOU is under development between the ISDA, IDEQ, USEPA, and the Idaho Cattle Association. The public comment period on the draft MOU closes November 11, 2000. The MOU will establish ISDA as the primary regulatory agency and delegate certain regulatory authorities from IDEQ to ISDA. IDEQ and USEPA will provide technical assistance, training, program review, and direct involvement in cases of imminent and substantial danger to human health or the environment. The Idaho Cattle Association is responsible for outreach and education to beef animal feeding operations on program requirements.

3.0 State Regulations Regarding AFOs/CAFOs

In 1999 a law was passed directing IDEQ to develop rules regulating new and expanded large swine and poultry operations. The law directed IDEQ to establish what was deemed to be "large." The law directed IDEQ to develop rules that would protect surface and ground water quality. IDEQ finalized these rules in April 2000. The rules identify as "large" and subject to the rule, operations with more than 2,000 animal units. An "expanding" operation is one that increases its capacity by 10 percent. Operations covered by the regulation are required to apply

for and obtain a permit that covers the construction, operation, and closure of the facility. Nutrient Management Plans prepared by a certified planner are required for these operations, and NRCS Code 590 is identified as the standard for these plans. In 2000 additional legislation was passed requiring IDEQ to amend the rule to require financial assurances for the operation, closure, and remediation of swine and poultry operations.

In 2000, the Beef Cattle Environmental Control Act was passed. It directs ISAD to develop a program to oversee the design and construction of beef cattle animal feeding operations. Requirements include the development of nutrient management plans.

The Idaho Water Quality Standards and Wastewater Treatment Requirements (Title 1, Chapter 2) regulate confined feeding operations and land treatment of solid and liquid dairy waste as it relates to protecting state waters (Palmer, 1993). Idaho Dairy Law (Title 37, Chapter 4) regulates confined feeding operations as they apply to waste management and sanitation of Grade A dairy products. Rules of the Department of Agriculture Governing Dairy Waste (IDAPA 02, Title 04, Chapter 14) govern the design, function, and management practices of dairy waste systems.

The Idaho Ground Water Quality Rule (IDAPA 16, Title 1, Chapter 11) regulates confined feeding operations and land treatment of solid and liquid dairy waste as it relates to protecting ground water (Palmer, 1993).

4.0 Type of Permits

NPDES

Idaho is not authorized to issue NPDES permits. Therefore, animal feeding operations that qualify under federal CAFO regulations are covered under EPA Region 10's general NPDES permit (NASDA, 1997).

Other

Idaho issues state permits to dairy farms that cover both environmental quality and food safety under the terms of an MOU between state and federal regulators and the Idaho Dairymen's Association. Idaho dairy farms must have Grade A or B milk permits, and all dairy farms' waste systems are linked to these permits (NASDA, 1997). No milk producer can sell milk unless the dairy farm has a Grade A permit, which requires dairy farm operators to install and use dairy waste systems in a manner consistent with the Idaho Waste Management Guidelines for Confined Feeding Operations.

5.0 Permit Coverage

Under Rules Regulating Swine and Poultry Facilities, all new or expanding swine and poultry facilities with a one-time capacity for 2,000 animal units would be required to obtain a permit. The rule defines an AU to be 2.5 swine, each weighing more than 55 pounds; 10 weaned swine, each weighing less than 55 pounds; or 100 chickens, turkeys, ducks, geese, or any other birds raised in captivity. The permit covers construction, operation, and closure of the facility. The permit application must include a construction plan, site characterization, nutrient management plan, and closure plan. The site characterization plan includes any land application site(s) owned or operated by the applicant. The rules identify the contents of these plans and reports. IDEQ is responsible for the review and approval of the permit. The permit approval process includes a

public notice/review component. Existing facilities are exempt from the requirement to obtain a permit if they register within 3 months of the proposed rule as long as they do not expand. Existing facilities must submit a nutrient management plan and a closure plan within 2 years of the effective date of the rule.

All dairy farms with one or more milking cows, sheep, or goats must have a state-issued Grade A or B permit that qualifies the producer to sell milk. Dairy waste management systems are regulated through the milk grading permits. The ISDA is responsible for the review and approval of the design, construction, operation, and location of dairy waste systems. These waste systems must conform to the Idaho Waste Management Guidelines for Confined Feeding Operations. These permits require Nutrient Management Plans prepared in accordance with NRCS Code 590.

Rules to implement the Beef Cattle Environmental Control Act are still under development.

6.0 Permit Conditions

Approvals

ISDA is responsible for the review and approval of permits issued to dairy operations. IDEQ is responsible for the review and approval of permits issued to new or expanding swine and poultry operations. The draft MOU distributed for comment for implementation of the Beef Cattle Environmental Control Act gives ISDA primary responsibility for implementation of the program to address beef cattle operations.

Lagoon Design/Specifications

The Rules Regulating Swine and Poultry Facilities require IDEQ to determine whether the operation is suitable for the proposed location. IDEQ considers the location of the facility relative to flood zones, dwellings, wells, surface and ground water, and other relevant site features. The rules contain specific requirements applicable to lagoons and other liquid storage impoundments. Lagoons and impoundments are not permitted in the 100-year floodplain. Lagoons and impoundments must maintain 1 foot of freeboard in addition to storage requirements, and seepage rates cannot exceed 1×10^{-7} cm/sec. Ground water and/or leak detection monitoring is required for all operations that use a liquid storage impoundment.

Discharge Rules

CAFOs that have been issued NPDES permits by the USEPA would be subject to the discharge rules in the Effluent Limitations Guidelines for Feedlots (40 CFR Part 412). The Idaho swine and poultry operation rules require facilities to be designed to contain the minimum expected operating water balance, the 25-year, 24-hour rainfall event, and the 1 in 5-year winter runoff. No other discharges are permitted. The ISDA Beef Cattle Animal Feeding Operation Program, Overview of Compliance and Enforcement indicates that the number of these operations with flowing discharges is expected to be very low. The program also indicates that direct animal contact is considered to be a discharge.

Waste Management Plans

The dairy waste and swine and poultry operation rules implemented by ISDA and IDEQ require the development of nutrient management plans developed in accordance with NRCS standards.

The dairy waste rules specifically require covered operations to comply with the 1997 Idaho Waste Management Guidelines for Confined Feeding Operations.

These guidelines state that livestock waste management plans, submitted to either IDEQ or ISDA should include:

- A description of equipment and structures used to collect, transport, store, and apply animal wastewater, including storage volume and time.
- Schedules for emptying and applying wastes.
- Schedules, rates, and locations for application of wastes.
- Written agreements with other landowners to accept liquid wastes.

Separation Distances

Neither the dairy nor swine and poultry operation permit rules identify specific separation distances. The state recommends a 300-foot separation distance from dwellings and property lines. Some counties have separation distance requirements of up to 0.5 mile. The state prefers a 1,000-foot minimum separation distance from public water supplies. Storage lagoons should be 100 feet from streams and public water wells (Palmer, 1993).

Land Application Requirements

Nutrient Management Plans developed under the dairy and swine and poultry regulations require a nutrient management plan prepared in accordance with NRCS Code 590.

7.0 Enforcement Information

General Enforcement Information

ISDA administers the rules governing dairy waste (IDAPA 02, Title 04, Chapter 14) as set forth in the 1995 Idaho Dairy Pollution Prevention Initiative Memorandum of Understanding (MOU). This MOU gives ISDA the responsibility for promulgating and enforcing rules to carry out the MOU, including developing dairy waste inspection protocols, conducting periodic inspections to ensure compliance with the Clean Water Act (CWA) and Idaho Water Quality Standards, reporting releases to U.S. waters, and approving the design and construction of dairy waste management systems as required in the Idaho Waste Management Guidelines for Confined Feeding Operations. The MOU being developed to support implementation of the Beef Cattle Environmental Control Act also defines the specific roles of ISDA, IDEQ, and EPA.

8.0 Voluntary Programs

IDEQ provides training and technical assistance to ISDA and individual dairies upon request.

9.0 Additional State-Specific Information

Cooperative Extension Service

Information about the University of Idaho Cooperative Extension Service can be found at *www.uidaho.edu/ag/extension/*.

Comprehensive Nutrient Management Plan (CNMP) Certification

The link between the swine and poultry certification requirements for nutrient management plans and the dairy CNMP certification program provided by ISDA is not clear. The definitions of certified planner in both regulations are the same. Information on swine and poultry certification education was not provided, and the regulation does not indicate whether the program offered by ISDA is sufficient for certification.

Memorandum of Understanding (MOU)

The Idaho Dairy Pollution Prevention Initiative Memorandum of Understanding (MOU) was developed by the Idaho Dairymen's Association, Idaho State Department of Agriculture, USEPA, and IDEQ. The MOU was established with the recognition that a formalized and efficient effort was needed to ensure that Idaho dairymen comply with the Clean Water Act and Idaho Water Quality Standards and Wastewater Treatment Standards. To prevent duplicate inspection services, the agreement recognized ISDA as the lead agency for dairy waste inspections. IDEQ, ISDA, Idaho Dairymen's Association, and USEPA are party to the MOU. A similar MOU is being developed to support implementation of the Beef Cattle Environmental Control Act. This MOU involves the ISDA, IDEQ, US EPA, and the Idaho Cattle Association.

10.0 References

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USEPA. 1999. *Inspecting Animal Feeding Operations in Idaho*. EPA 910-F-99-005. U.S. Environmental Protection Agency, Washington, DC.

Oregon's CAFO Program

1.0 Background

In Oregon NPDES permits are required for facilities that discharge pollutants to surface waters and include both state and federal requirements. Water Pollution Control Facilities (WPCF) permits are issued for systems that do not directly discharge to surface water. The NPDES and WPCF programs issue both individual and general permits. In Oregon, CAFOs are covered by general WPCF permits.

The Oregon Department of Agriculture (ODA) is the primary agency with the responsibility of protecting water from agricultural point and nonpoint source pollution. In 1995 Oregon passed the Agricultural Water Quality Management Act (AgWQM), which directs ODA to work with farmers and ranchers to develop Agricultural Water Quality Management Area Plans for watersheds. This voluntary program that farmers to use best management practices (BMPs) in designated watersheds with AgWQM Area Plans. Nutrient management plans are not required even though nutrient runoff is one of the problems the AgWQM Area Plans can address on a local level (ODA 2000a).

Based on information provided to EPA by the U.S. Department of Agriculture (USDA), it is estimated that there are 240 AFOs with 300 to 1,000 animal units and 70 AFOs with more than 1,000 animal units in Oregon. These are primarily in the dairy and poultry (turkey) livestock sectors USDA, 1999; USDA, 2000).

2.0 Lead Regulatory Agency

Oregon's Confined Animal Feeding Program began in the early 1980s. CAFOs in Oregon are regulated by ODA's Natural Resources Division. The most recent development in Oregon's CAFO program was the implementation of Senate Bill 1008, enacted in 1993. This bill, introduced at the request of the Oregon Dairy Farmers' Association, provides the ODA statutory authority to administer the entire CAFO program, from the issuance of permits through enforcement, including civil penalty assessment.

3.0 State Regulations Regarding AFOs/CAFOs

NPDES general permits are issued under the authority of OAR 340-45-005 through 340-45-065. NPDES individual permits are issued under the authority of ORS 468B.050 and OAR 340-45-005 through 340-45-065. WPCF general and individual permits are issued under the authority of ORS 468B.050, OAR 340-14, and OAR 340-71 and in accordance with OAR 340-40 (DEQ, 1999). Farmers are required to obtain permits to construct, install, modify, or operate a CAFO wastewater containment or disposal system under ORS 468B.050. Since 1993 ODA has had authority to administer the entire CAFO program (Searle, 1997).

CAFOs are exempted by state law from air quality regulation. They may be required to observe land use compatibility laws, Oregon Safety and Health Administration rules, and food sanitary and safety requirements (NASDA, 1997).

4.0 Types of Permits

NPDES

Oregon is authorized to administer the federal NPDES permit program. The Oregon NPDES program issues both general and individual permits, which are valid for a maximum of 5 years (DEQ, 1999). Oregon has elected to issue state WPCF permits to CAFOs instead of NPDES permits.

Other

All Oregon CAFOs that have wastewater containment or disposal systems and confine animals for at least 4 out of 12 months must obtain coverage under a comprehensive general WPCF permit (DEQ, 1990c). The WPCF permit bases the maximum number of animals that can be confined at a facility on the capacity of the wastewater treatment system specified in the permit. CAFOs may not exceed the maximum by more than 10 percent or 25 animals, whichever is greater. The modified permit, issued on October 8, 1990, has no expiration date, but it may be modified or revoked by DEQ.

CAFOs that handle all manure in the dry state and prevent dry manure from getting into water systems are exempt, although a permit may be required if the facility has other wastewaters. The conditions of the general permit require that:

- The wastewater containment system must be sufficient to contain wastewater when it cannot be safely applied to cropland.

- All manure and various forms of wastewater must be contained during the winter and applied to cropland at agronomic application rates during the summer.

- Written approval of detailed plans and specifications must be obtained from ODA before constructing or modifying wastewater control facilities.

ODA's Natural Resources Division issues another state permit for construction or modification of CAFOs. Individual permits may be required to protect ground water.

5.0 Permit Coverage

The WPCF permit is required for any CAFO with a wastewater system that confines animals for 4 months or more out of a 12-month period, including dog kennels. Under Oregon law, CAFOs are required to apply for a permit. Oregon's definition for "confined animal feeding operations" as it appears on the permit does not specify an animal unit threshold. The NPDES general permit does not include activities covered by an individual WPCF permit until that permit has expired or has been canceled. (A person may request to have the individual permit canceled as long as the activity is covered by the general permit.)

6.0 Permit Conditions

Approvals

A site appraisal is required before development. Producers who wish to construct facilities,

commence operations, or substantially modify an operation permit must submit plans and specifications for the facility and obtain written approval for the action (Copeland et al., 1999).

Lagoon Design and Specifications

CAFOs must follow a specific design standard for waste management systems. The standards are found in "Guidelines for the Design and Operation of Animal Waste Facilities" (ORS 340.051). Lagoons should be designed to hold maximum accumulated rainfall and manure runoff from the entire collection area for the maximum period of accumulation. All manure and various forms of wastewater must be contained during the winter and applied to cropland at agronomic rates during the summer, and written approval of detailed plans and specifications must be obtained from ODA before constructing or modifying wastewater control facilities. Liner materials vary based on the situation, but lagoons and collection slumps should be constructed of well-compacted, good-quality soil and stabilized with vegetation recommended by the Agricultural Research Service (Copeland et al., 1999). The lagoon seepage allowed is 10^{-7} cm/sec or $\leq$ 1/8 foot/day. A 2-foot freeboard satisfies storage capacity requirements (NASDA, 1997).

Discharge Rules

Oregon does not have the 25-year, 24-hour storm exemption in its CAFO permit (Craig, 2000).

Waste Management Plans

No information was found in publically available sources.

Separation Distances

Separation distances from dwellings and property lines are determined by local land use ordinances. Wells must be 100 feet from the feedlot. There are no state standards regarding distance between waste structures and ground water (NASDA, 1997).

Land Application Requirements

Application of waste must not exceed annual agronomic rates. Wastewater must be dissipated by evaporation (NASDA, 1997). Slurries that are applied by a tank wagon or truck should be spread uniformly. Liquid manure irrigation systems have to be operated according to a predetermined plan of rotation to ensure that coverage is uniform. Adequate land for the effective assimilation of manure slurry must be provided year-round. Solid animal waste must also be applied to the land uniformly. Solids should not be overapplied or deposited where they can be washed away into surface water drainage.

Other Requirements

Operators may be required to use BMPs (Searle, 1997). Dead animals must be disposed of by approved methods.

7.0 Enforcement Information

ODA has the authority to assess civil penalties for permit violations and to levy fines for failure

to obtain appropriate permits. Oregon DEQ also plays a role in enforcement and may assess certain penalties against violators.

Three kinds of enforcement actions are described by ORS 603.074.0040: the Notice of Noncompliance, the Plan of Correction, and the Notice of Civil Penalty Assessment. Each of these documents is issued by the Director of the State Department of Agriculture, must be in writing, and must be served to violators personally or through certified or registered mail. The Notice of Compliance notifies the owner of operator of a CAFO that a permit violation has occurred. It must reference the particular statute, administrative rules, or order involved; and when the violation occurred. The notice also includes the steps that the owner or operator may take to correct the problem and suggests a reasonable time frame for doing so. A Plan of Correction states the actions that must be taken by an owner or operator to eliminate a violation and a schedule for accomplishing the requirements. Failure to correct the problems may result in a Notice of Civil Penalty. A person receiving a Notice of Civil Penalty may request a hearing.

Producers have the opportunity to negotiate remedial actions with ODA and Oregon DEQ for permit violations. The State of Oregon does take action against animal production operators who violate the terms of their permits and pollute the waters of Oregon. CAFOs will be fined $500 for not having a permit when one is required. If an operator has been assessed a civil penalty by DEQ, $1,000 annual inspection fee will be assessed for 3 years (DEQ, 1990c).

Inspection Programs

Under a 1987 statute, ODA has the authority to inspect CAFOs for compliance. Violators are identified through complaints, aerial surveys, and periodic inspections. Routine onsite inspections are not required. To determine a priority for ground inspections, flyovers were implemented in the Tualatin River Basin. Flyovers continue to help prioritize CAFO inspections in other watersheds of Oregon.

Inspection in Oregon consists of announced inspections. Joint inspections conducted by ODA and USEPA are unannounced. Announced inspections are routine, whereas joint inspections typically occur during wet weather. In past years, an average of 30 joint inspections have been conducted annually. Most Oregon CAFOs are dairies, and the bulk of inspected facilities are dairies (USEPA, 1998).

8.0 Voluntary Programs

Education, training, and technical assistance are available from NRCS, SWCDs, Oregon's extension service, and private engineers (NASDA, 1997).

State programs have not been identified. At the federal level, Oregon farmers who intend to construct farm wastewater containment systems are encouraged to enroll in USDA/FSA cost-sharing programs. Federal cost-share programs are used to encourage good practices.

ODA has been involved in education and outreach that includes explaining the EQIP process to producers (USEPA, 1998).

9.0 Additional State-Specific Information

Cooperative Extension Service

Information regarding the Oregon State University Cooperative Extension is available at *http://osu.orst.edu/extension*.

Comprehensive Nutrient Management Plan (CNMP) Certification

Oregon does not have a CNMP preparer certification program. Oregon issues Water Pollution Control Facility Permits to CAFOs. These permits do not require a nutrient management plan (ODA 2000).

10.0 References

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Washington's CAFO Program

1.0 Background

Based on information provided to EPA by USDA, it is estimated that there are 360 AFOs with from 300 to 1,000 animal units and 165 AFOs with more than 1,000 animal units in Washington. These are primarily in the dairy sector (USDA, 1999; USDA, 2000). A new NPDES/State Dairy Operation General Discharge Permit became effective on April 1, 2000, and will be in effect through March 31, 2005.

2.0 Lead Regulatory Agency

The Washington Department of Ecology (WDOE), Water Quality Program, is responsible for regulation of CAFOs under the State Water Pollution Control Act. Under the State Water Pollution Control Act, any animal feeding operation that results in the disposal of wastes into waters of the state requires a discharge permit. Discharges to surface waters would require an NPDES permit, and those to ground water would require a state waste discharge permit. Waters of the state include both surface and ground waters.

Normally, the Clean Water Act and State Water Pollution Control Act requirements are administered jointly.

3.0 State Regulations Regarding AFOs/CAFOs

Statutory authority for the regulation of Washington AFOs and CAFOs is given by Chapter 90.48 of the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC) Chapter 173-220 and Chapter 173-216. State regulations for determining which animal feeding operations are CAFOs and subject to NPDES permitting are consistent with the federal definition in 40 CFR 122.23.

In April 1998 the Dairy Nutrient Management Act of 1998 was signed into law, requiring all of Washington's dairies to comply with the federal Clean Water Act. The following requirements are part of the law:

- Every Washington dairy must develop and implement a certified nutrient management plan (developed per NRCS specifications).
- All dairies are subject to periodic, unannounced inspection conducted by WDOE.
- WDOE will continue to respond to complaints about certain water quality violations.
- A comprehensive database will be created to track CWA compliance and improvements in nutrient management on individual farms.
- Farms can be penalized up to $10,000 per day for water quality violations.
- Farms can be penalized for failing to register with WDOE and failure to meet deadlines for approval and certification of a plan.

- A zero tolerance policy on wastewater discharges during a period prior to plan certification and implementation will be enforced.

4.0 Types of Permits

NPDES

Federal and statewide CAFO program requirements are administered jointly. The Washington Department of Ecology issued the new NPDES/State Dairy Operation General Discharge Permit on March 1, 2000. It will become effective on April 1, 2000, and will remain in effect through March 31, 2005. The previous Dairy Farm NPDES and State Waste Discharge General Permit became effective on September 3, 1994, and expired on September 2, 1999. The current permit covers farms that meet the definition of a concentrated dairy feeding operation in RCW 90.64.010(3), meet the definition of a concentrated animal feeding operation (under CFR Part 122.23, Appendix B), or are significant contributors of pollution (RCW 90.64.020 or RCW 90.64.030). The permit does not cover the activities or discharges of an individual NPDES permit or state permit (until those permits have expired).

All dairies covered by the general permit are required to have a current nutrient management plan that meets the minimum elements established under RCW 90.64.026 and is approved by the local conservation district. Dairies that do not have a current plan were given 6 months to develop the plan, with up to an additional 8 months for implementation.

The general NPDES permit for dairy farms contains discharge limitations in accordance with federal regulations. In addition, the permit contains ground water effluent limitations that require the permittee to apply process waste to lands in accordance with the facility's nutrient management plan. Process waste discharges, including seepage from waste lagoons and leachate from silage, cannot violate the state Ground Water Quality Standards.

5.0 Permit Coverage

Permits are required for dairies consistent with the current definition of a CAFO in 40 CFR 122.23.

6.0 Permit Conditions

Approvals

o information was found in publicly available sources.

Lagoon Design and Specifications

All new waste storage facilities constructed at facilities covered by the permit must be sited, designed, constructed, and operated and maintained consistent with the operation's nutrient management plan.

Discharge Rules

If a waste discharge occurs (except during the 25-year, 24-hour storm event), the permittee must record the following:

- The description, date, time, and duration of the discharge
- Estimated volume
- Name and location of the receiving stream
- Appropriate corrective steps

Then, the permittee has to notify the Department of Ecology within 24 hours if the discharge was to surface water. Written reports have to be submitted to the Department within 5 days (WDOE, 2000a).

Waste Management Plans

Under the 1998 Dairy Nutrient Management Act, all dairies are required to have a comprehensive nutrient management plan approved by their local conservation district by July 1, 2002. The act also requires that the dairy producer and local conservation district both certify these plans are fully implemented by December 31, 2003. The 1998 act also required the Washington Conservation Commission to develop minimum elements that all of the nutrient management plans must contain. The Conservation Commission approved these minimum elements on December 2, 1998. The minimum elements incorporate the technical specifications contained in the NRCS Field Office Technical Guide. The revised NPDES general permit for dairies contains a requirement for all covered operations to develop and implement a nutrient management plan.

Separation Distances

No information was found in publicly available sources.

Land Application Requirements

Wastes can be applied to the land consistent with the site-specific nutrient management plan prepared for the operation.

Other Requirements

Facilities must keep records for 3 years.

7.0 Enforcement Information

WDOE and the State Attorney General have the authority to levy fines under Washington's Water Pollution Control Law (Chapter 90.48 RCW).

WDOE site investigations are triggered by complaints. Informal enforcement actions are preferred. Confirmed violations of the Water Pollution Control Act are referred to the local conservation district so that operators can voluntarily develop a conservation plan. Formal enforcement actions are taken when voluntary compliance cannot be achieved or when the violation is significant. Formal enforcement may include a notice of violation (NOV), administrative order, civil penalty, resource damage assessment, and referral for court action. Innovative approaches such as mediation, environmental audits, mandatory education, consent orders or decrees, and compensatory actions may be applied (USEPA, 1993).

Inspection Programs

Unpermitted CAFOs are identified by complaints, which are investigated by the Department of Ecology (*Focus*, 1993). Inspection requirements for a facility are determined at the initial site inspection. Under the general NPDES permit, facilities must allow an authorized representative of the WDOE to enter the property where a discharge was located; access records; inspect the monitoring equipment or method of monitoring required in the permit; inspect the collection, treatment, pollution management, or application facilities; and sample any discharge of pollutants.

As a result of the Chehalis watershed's approach, the CAFO/AFO program was coordinated with the TMDL program in that watershed. WDOE conducted inspections of all dairies in the watershed in support of the TMDL process (USEPA, 1998).

8.0 Voluntary Programs

The Conservation Districts and Washington Conservation Commission work with WDOE to protect water quality (New Dairy Waste Management Legislation, 1993).

Washington farmers have access to the regional Western Integrated Ranch/Farm Education (W.I.R.E) program.

9.0 Additional State-Specific Information

Cooperative Extension Service

Information about the Washington State University Extension is available at *http://rxt.wsu.edu/*.

Comprehensive Nutrient Management Plan (CNMP) Certification

Washington does not have a CNMP preparers certification program. The Washington Dairy Nutrient Management Act requires that all dairy farms licensed by the Washington Department of Agriculture have CNMPs approved by their local Conservation District by July 1, 2002. Both the Conservation District and the dairy producer are required to certify the nutrient management plan by December 31, 2003. Certification means the local conservation district certifies that a dairy producer has constructed or otherwise put into place the elements necessary to implement his or her dairy nutrient management plan and that the dairy farmer acknowledges that he or she is managing dairy nutrients as specified in his or her approved diary nutrient management plan (WDOE, 2000b).

Case Studies/Innovative Programs

Good performance at wastewater discharge permit facilities is rewarded with a reduction in monitoring. More information is provided at *www.wa.gov/ecology/biblio/972032wqfa.html*.

10.0 References

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